Extron Electronics
INTERFACING, SWITCHING AND CONTROL

TLP 710CV and TLE 710 • Setup Guide

IMPORTANT:
Before connecting the TLP 710CV to a power source, refer to the TLP 710CV user guide, which is available at www.extron.com.

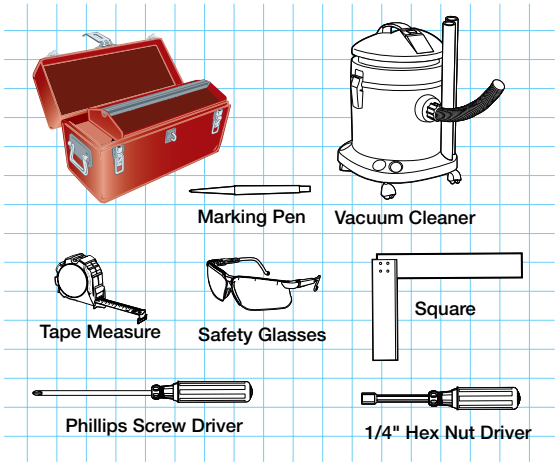
Overview

The Extron TLP 710CV 7-inch Cable Cubby® TouchLink™ touchpanel and TLE 710 enclosure provide AV connectivity using convenient pullout cables. The TLP 710CV also provides simple and versatile configuration and control for a range of IP Link® control systems using a touch screen. The touchpanel communicates through an Ethernet connection to a configurable IP Link control processor. Video and audio input is provided by a twisted pair cable connected to an MTP transmitter.

NOTE: The network output must connect via a network switch, hub, or router to an Ethernet LAN or the Internet, with an Extron IP Link controller on the same network. Suggested controllers include IPL T S series (for example, IPL T S4), IPL 250, IPL T CR48, IPL T SFI244, or IPCP series.

The first four pages of this guide provides basic instructions for experienced installers to mount either the TLP 710CV or the TLE 710. The last four pages show initial configuration for the TLP 710CV. For reference material and full instructions about configuring the touchpanel, see the *TLP 710CV User Guide* (see **www.extron.com**).

Tools Required for Installation

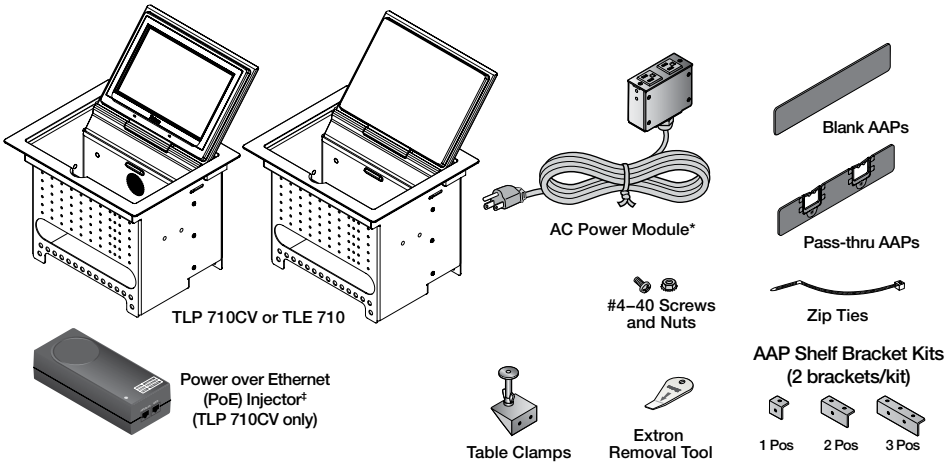


Planning

- Before making any cuts, select the best location for the TLP 710CV or TLE 710.
- Ensure that the edge that opens on the lid is oriented correctly.
- Ensure there is enough space for all the system cables and components, including cable retractors, if they are to be installed.
- Decide on the method for cutting a hole in the table:
  - Hand router and template
  - CNC wood router
  - Jigsaw and paper template
- Verify that you have the correct template or dimensions.
- Check all relevant regulations.
  - Ensure the installation complies with local, state, and national building and electrical codes.
  - Ensure the installation complies with the Americans with Disabilities Act or other accessibility requirements.

Included Parts

	With Power Module	Without Power Module
AC Power Module*	1	0
Pass-through AAPs†	3	3
Blank AAPs	6	6
1-space bracket kit	0	1
2-space bracket kit	3	4
3-space bracket kit	1	1



NOTES:

* Inside the US, the TLP 710CV may be purchased with or without an AC power module. If required, a power module for the TLE 710 must be purchased separately. Outside the US, see **www.extron.com** to find an AC power module for your country.

† Active or Passive AAPs must be purchased separately (see **www.extron.com**).

‡ The Power over Ethernet injector is provided only with the TLP 710CV.

Mounting the TLP 710CV and TLE 710

Step 1 — Obtain Cut-out Dimensions

ATTENTION:

- The table should be cut only by licensed and bonded craftspeople.
- Make certain the correct cut-out dimensions are being used before proceeding to the next step. Extron is not responsible for mounting holes that are incorrectly cut.
- The surfaces of the Cable Cubby enclosure have screws and other protruding hardware that could damage fine furniture. Do not rest the enclosure on unprotected furniture.
- Ensure the table surface is at least 0.375 inches (0.95 cm) thick.

- If using a hand router, you should purchase the Extron TLP 710CV routing template (part number **70-980-01**).
- If using a CNC wood router, use the exact cut-out dimensions (see below).
- If using a reciprocating saw or jigsaw use the paper cut-out template (part number **68-2179-01** available under the **Downloads** tab on the TLP 710CV page at **www.extron.com**.).

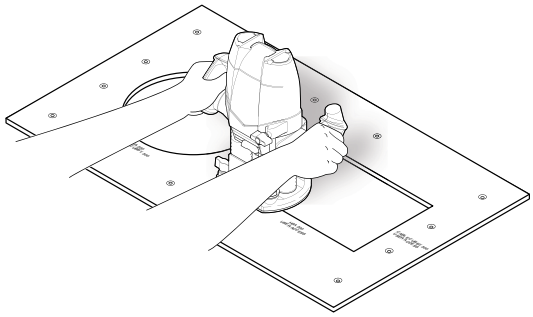
Step 2 — Cut the Surface

CAUTION: **Risk of personal injury:** To avoid eye injury, wear safety glasses when operating power equipment.

Be certain the cut is laid out in exactly the desired location and the edge that opens on the lid is correctly oriented. After verifying and checking dimensions, cut a hole in the surface of the furniture where the enclosure will be installed (see "Preparing the Table" in the *TLP 710CV User Guide*). There are three methods for cutting the hole in the table:

Using a hand router

Recommended method — Use the Extron TLP 710CV routing template, part number **70-980-01**. Refer to the *Routing Template User Guide*, available at **www.extron.com,** to prepare the template and use the template to cut the hole.



NOTE: The metal router guide must be purchased separately. It is reusable and should not be discarded when the installation is complete.

Using a CNC wood cutter

Recommended method — Use the exact cut-out dimensions:

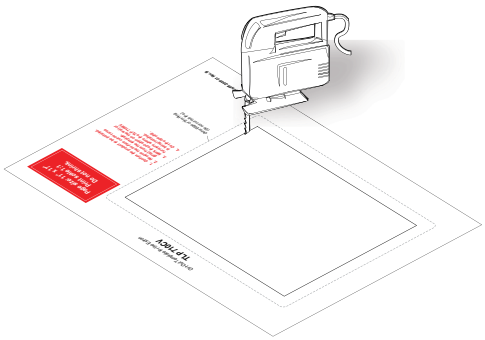
8.90 +0.00/-0.02 inches W x 7.10 +0.00/-0.02 inches D

(22.61 +0.00/-0.05 cm W x 18.03 +0.00/-0.05 cm D)

NOTE: The underlined dimension is the connector or AAP access side for the unit.

Using a reciprocating saw or jigsaw

Acceptable method — Use the paper cut-out template (part number **68-2179-01** available under the **Downloads** tab on the TLP 710CV page at **www.extron.com**.)



Step 3 — Run all Cables

Run all cables necessary to support the AC connector, the cables stored in the cubby, and all planned AAP connectors. Run the cables below the table and through the hole that was cut in Step 2. Leave enough slack in the cables to connect or route them before the cubby is installed in the table. Leave enough space under the enclosure for the external power supply and connection of AV cables and the network connection for the TLP 710CV.

Step 4 — Install Cable Retractors (Optional)

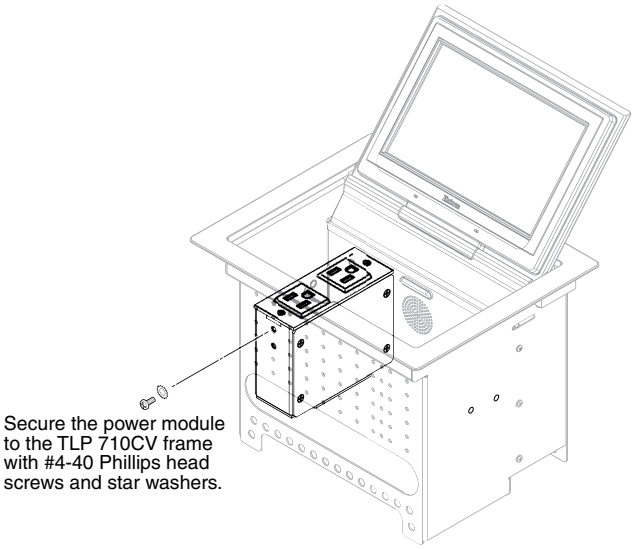
If required, Extron cable retractors should be installed in the enclosure at this stage. For complete information about retractors and how to install them, see the *Retractors User Guide*, which is available from the Extron website (**www.extron.com**).

Step 5 — Install Power Module (Optional)

ATTENTION: For units that are used in North America, only use AC power modules that are UL Listed Model "Cable Cubby AC Power Module".

The unit is not UL Listed if it uses any AC power module other than Model "Cable Cubby AC Power Module".

NOTE: For models that do not include a power module, see the Extron website to select a power module that is suitable for your location.



Secure the power module to the TLP 710CV frame with #4-40 Phillips head screws and star washers.

The power module takes up two or three AAP spaces, depending on the model, and may be installed before or after the AAP assembly is installed. It may be installed with AAPs on either side.

1. Secure the power module into position with #4-40 Phillips head screws and star washers.

   CAUTION: **Risk of electric shock:** To ensure good electrical grounding, you must use the star washers with the screws.

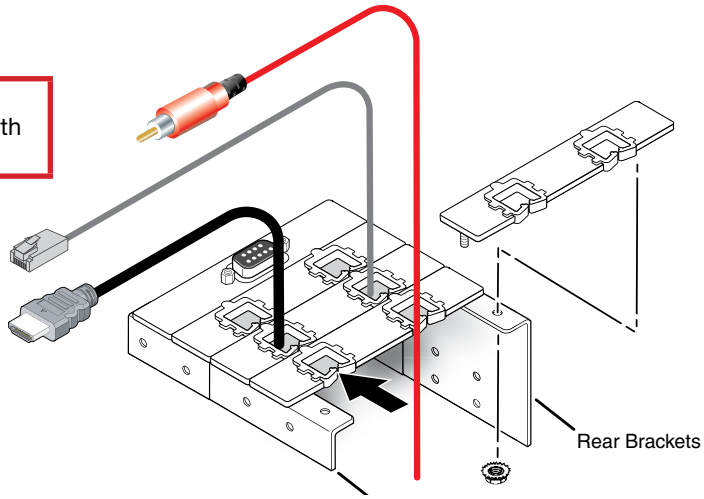
2. Run the cable or conduit to a convenient junction box. Extron recommends the circuit be attached to a junction box that is directly wired to the main circuit.

Step 6 — AAP Assembly

Install all desired cables into the cable pass-through AAPs and install the AAPs into the Cable Cubby.

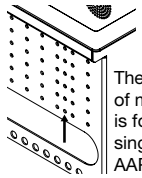
The simplest way to install the cables and AAPs is to populate the AAP brackets outside the cubby and then install the populated AAP shelf assembly into the cubby.

Install cables in the pass-through holes as shown in the figure to the right.



TIP: Hand tightening the #4-40 nuts makes it easier to place and secure the assembly inside the enclosure.

NOTE: An extra column of AAP bracket mounting points is available for use with TLP Single-space AAP mounting brackets (part number **70-693-01**). Single-space brackets will not fit in any other location.



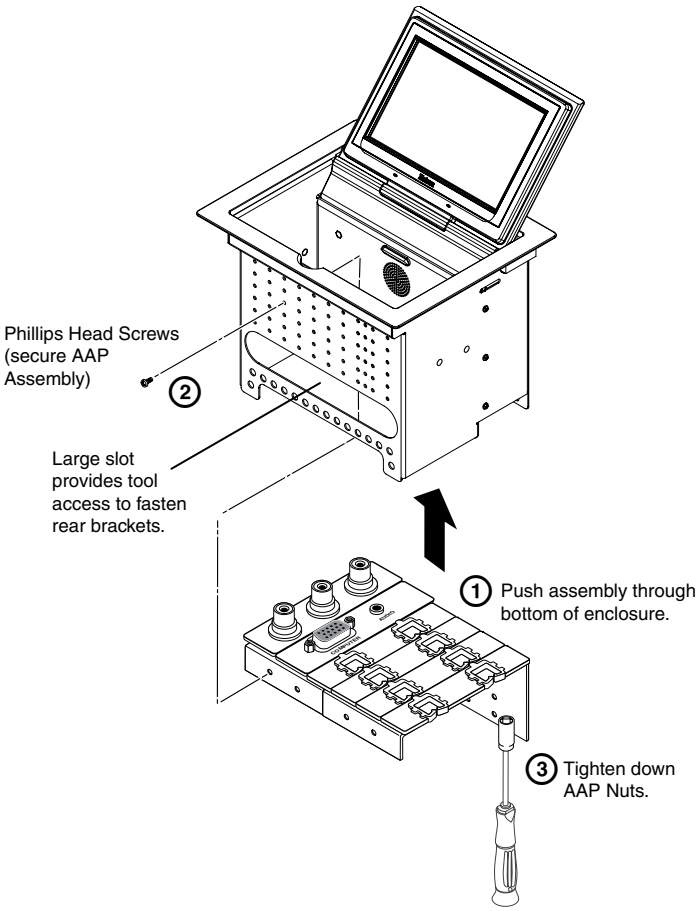
The extra column of mounting points is for installing single-space AAP brackets.

Step 7 — Install the AAP Assembly

1. From under the table, push the first AAP assembly through the bottom of the enclosure. The holes in the rear bracket must align with the bottom row of holes on the rear face of the enclosure.

   TIP: Ensure there is enough space above the AAP assembly for the lid to close completely without cables or connectors contacting the touchpanel.

2. Secure the AAP assembly into position with the provided Phillips head screws.
3. Tighten the nuts that secure the AAPs to the brackets.


Phillips Head Screws (secure AAP Assembly)
2
Large slot provides tool access to fasten rear brackets.
1 Push assembly through bottom of enclosure.
3 Tighten down AAP Nuts.

Step 8 — Mounting the Enclosure

Mount the Cable Cubby enclosure in the table.

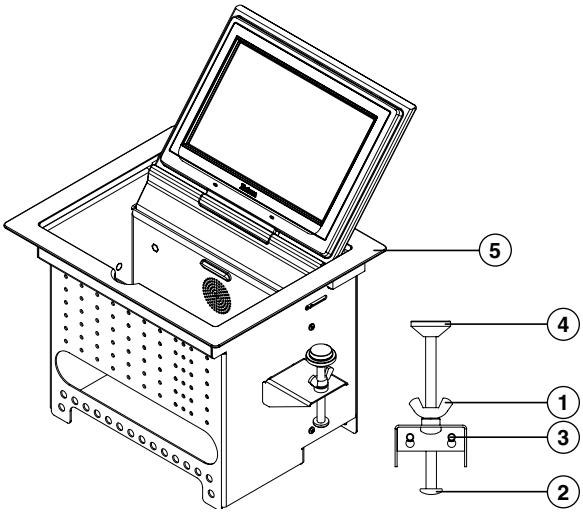
CAUTION: The flanged edges of the trim ring are sharp. Exercise caution when the cubby is not installed in a table to prevent personal injury.

ATTENTION: The trim ring edges are soft and can easily be nicked or bent. Exercise caution when handling and mounting the enclosure.

1. Remove the edge grommet protecting the edges of the trim ring and the plastic film on the finished surfaces.

ATTENTION: Do not use isopropyl alcohol or other solvents to clean the Cable Cubby. Strong solvents will ruin some finishes.

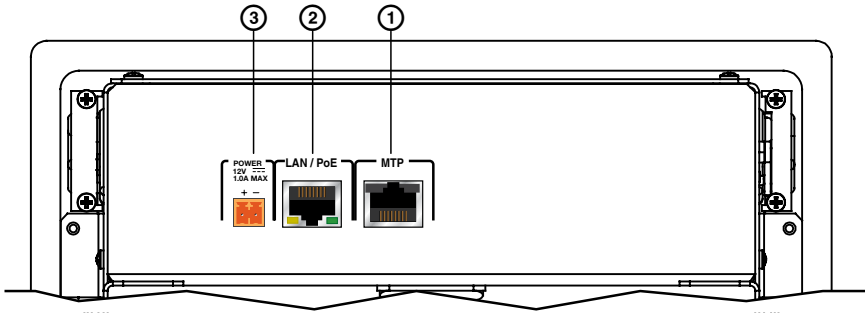
2. Carefully lower the enclosure into the hole cut in the table (see "**Step 2 — Cut the Surface**" on page 2). Ensure the trim ring (⑤) is flush with the top of the table.
3. Under the table, attach the table clamps (③) to the pins on each side of the enclosure. It may be necessary to loosen the wingnuts (①) and the Phillips head screws (②).
4. When the clamps are properly seated on the pins, tighten the Phillips head screws until the clamp faces (④) are tightly secured against the bottom of the table.
5. To prevent the screws from becoming loose, secure the wingnuts against the table clamp bodies.



Connecting the TLP 710CV

NOTE: The rest of this guide applies only to the TLP 710CV (not to the TLE 710).

The cable connections are located in a panel on the bottom of the TLP 710CV:



① MTP connector
② LAN and PoE connector
③ External power supply connector

Step 9 — Connect the MTP Input

Connect the output of an Extron Mini Twisted Pair (MTP) transmitter to the MTP socket (①) on the TLP 710CV. This signal provides composite or S-video and audio input.

ATTENTION: Ensure the MTP transmitter is connected to the MTP socket (①, in the figure above). Both the MTP connector and the LAN and PoE connector use RJ-45 connectors, but the wires on each connector use different voltages. Inputting the wrong voltages into a socket will damage the TLP 710CV.

Step 10 — Connect the Network and Power Over Ethernet Connector

Extron strongly recommends using a Power over Ethernet (PoE) power supply, although a 12 VDC, 1.0 A power supply (not provided) can be used instead (see below).

ATTENTION:

- Before connecting the PoE connector (②), read the cautions listed in the "Network and Power over Ethernet Connector" section of the TLP 710CV User Guide, which is available at www.extron.com.
- Ensure the network connector is connected to the network socket (b). Both the MTP connector and the LAN and PoE connector use RJ-45 connectors, but the wires on each connector use different voltages. Inputting the wrong voltages into a socket will damage the TLP 710CV.

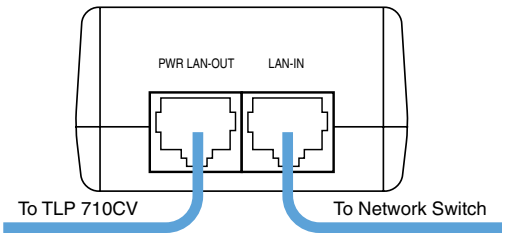
Connecting to the Network Directly (Using an external 12 VDC Power Supply)

If the PoE power supply is not used, run a straight-through cable from the LAN/PoE connection (②) to a network switch or router.

Connecting to a Power over Ethernet Power Supply

1. Use a straight-through LAN cable to connect the LAN-IN socket to a network switch or router.
2. Use a second straight-through LAN cable to connect the PWR LAN-OUT socket to the LAN/PoE connector (②) on the TLP 710CV. This cable carries network information and 48 VDC.
3. Connect the IEC power cord from the power supply to a convenient 100 VAC to 240 VAC, 50-60 Hz power source.

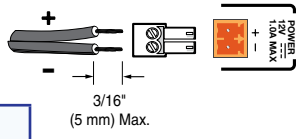
Power over Ethernet (PoE) Power Supply



Step 11 — Connect the External Power Supply (Optional)

CAUTION: Before connecting the power supply, read the cautions listed in the "Power Connector" section of the *TLP 710CV User Guide*, which is available at **www.extron.com**.

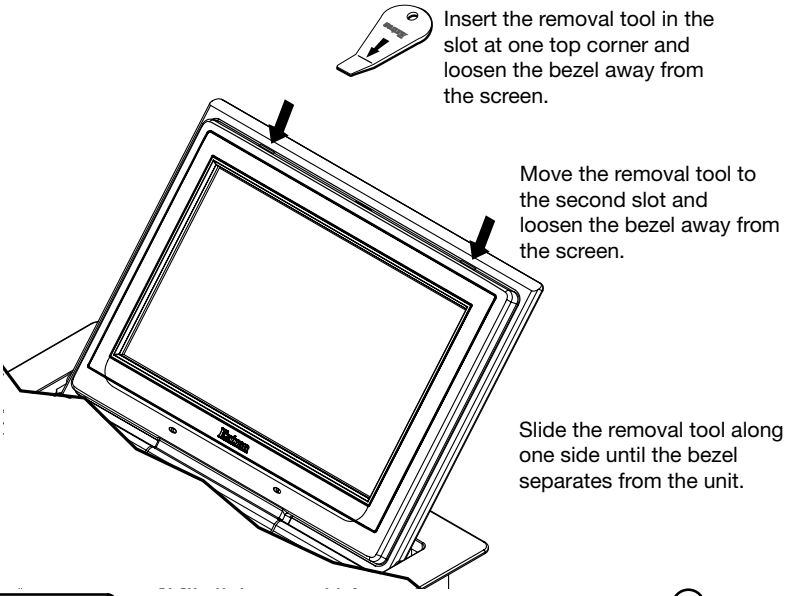
Extron strongly recommends using PoE to provide power to the TLP 710CV. To use a 12 VDC, 1.0 A power supply (not provided), connect the two pole, 3.5 mm captive screw connector from the power supply (part number **70-775-01**) to the power supply socket on the rear panel (③).



NOTE: For advice about using captive screw connections, see the notes in the "Power Connector" section of the *TLP 710CV User Guide*, which is available at **www.extron.com**.

Step 12 — Power on the TLP 710CV for the First Time

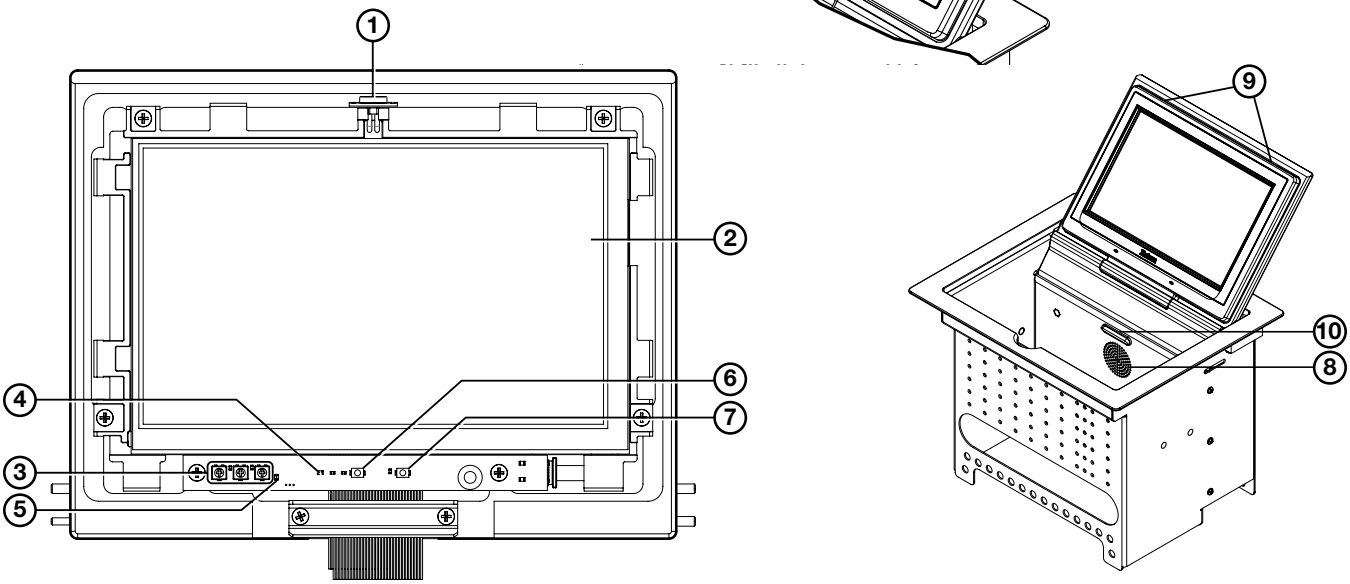
Power on all the devices connected to the TLP 710CV. When the 12 VDC power supply or the PoE power supply is switched on, the TLP 710CV will boot up and, if a graphical user interface (GUI) has been designed and loaded onto the touchpanel, that screen will be displayed. If a GUI has not been loaded, a plain blue screen will be displayed.


Insert the removal tool in the slot at one top corner and loosen the bezel away from the screen.
Move the removal tool to the second slot and loosen the bezel away from the screen.
Slide the removal tool along one side until the bezel separates from the unit.

Front Panel Features

With the lid down, the screen, light sensor, and the illumination LED are disabled. They are all activated by opening the lid.

To see all the front panel features, remove the bezel, using the Extron Removal Tool (see the figure to the right).



For a complete description of all these features and their function, see the *TLP 710CV User Guide*.

1. **Light Sensor** — monitors ambient light level and adjusts screen brightness.
2. **LCD screen** — has a 800x480 resolution with a touch overlay. Extron software is used to design and configure a graphic user interface to display buttons, text, or icons, which have user-defined functions associated with them (see **GUI Design and Configuration** on page 8).
3. **MTP Video Signal Adjustments** — Three MTP signal adjustments are available for S-video: luminance gain (VID/Y), S-video chrominance gain (C), and sharpness (S). For composite video signals, the VID/Y adjustment controls the gain.
4. **Reset LED** — provides feedback about the **mode status** when the user presses the reset button.
5. **Controller Communication LED** — is unlit during normal operation. The LED blinks red if the connection to the IP Link controller is lost.
6. **Reset Button** — allows the unit to be reset to one of **four different modes** (see page 8).
7. **Menu Button** — activates the **on-screen menus** for calibrating the unit.

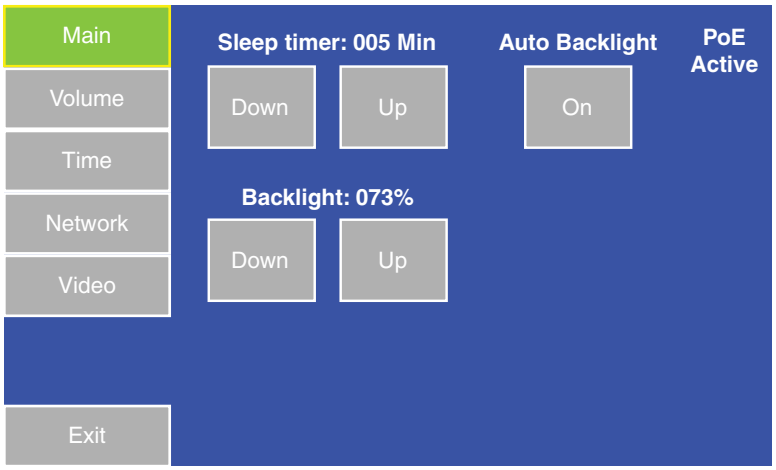
NOTE: The MTP video signal adjustments, reset LED, controller communication LED, reset button, and menu button can be accessed only after removing the front panel bezel (see the figure at the top of the page).

8. **Speaker** — provides audible feedback for the user.
9. **Bezel Removal Slots** — allow removal of bezel, using Extron removal tool (see the figure at the top of the page).
10. **Illumination LED** — provides light for cable cubby enclosure.

Initial Configuration

Before use, configure the touchpanel, using the on-screen menus.

1. Remove the bezel, using the Extron removal tool.
2. Press the Menu button once (⑦ in the figures on page 6). The Main menu screen opens.



3. Touch an on-screen button to highlight and select that option (the button turns green with a yellow border).
4. Use the **Up** and **Down** buttons to adjust the value. Some options have a single button and toggle between **Off** and **On** when the button is pressed.

There are five different screens (**Main**, **Volume**, **Time**, **Network**, and **Video**) that can be selected by pressing the appropriate button at the left side of the screen. There is also an **Exit** button at the bottom left corner of the screen for saving changes and leaving the menus.

Use the screens to adjust the following options (for more information, see the *TLP 710CV User Guide*).

Main — Adjusts the Sleep timer, Backlight, and Auto Backlight functions. The screen also provides information about the PoE status.

Volume — Adjusts the Master, Click, Sounds, and Line In volume settings.

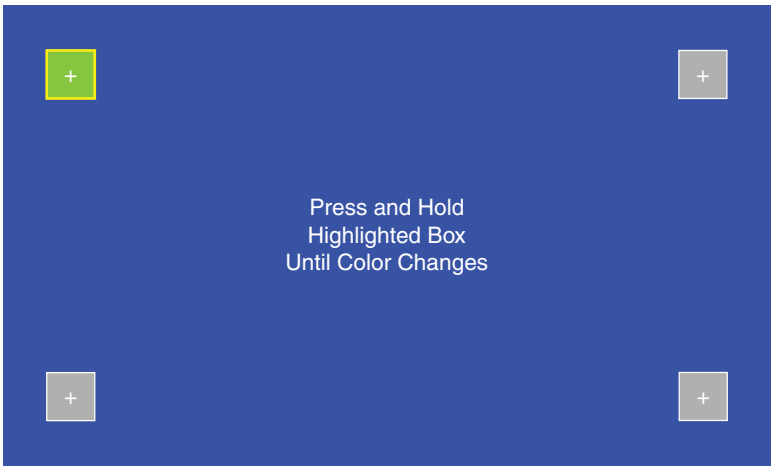
Time — Sets the correct time and date.

Network — Sets the IP address and the subnet mask, and enables or disables Dynamic Host Configuration Protocol.

Video — Provides a small video preview window and the controls to adjust the video contrast, color, brightness, and tint.

Calibration Screen

1. To access the calibration screen, press the Menu button a second time (⑦ in the figures on page 6). The calibration screen opens with the on-screen button in the top left corner highlighted.



2. Press the highlighted button until it turns gray and a new button is highlighted. When all four points have been calibrated, the screen reopens to the Main Screen.
3. Press **Exit** to close the on-screen menus.
4. Reattach the bezel.

Reset Modes

The touchpanel has four reset modes: Factory Firmware Mode, Run or Stop Events Mode, Reset All IP Settings Mode, and Reset Factory Defaults Mode. These modes can be initiated by pressing the reset button (⑥ in the figures on page 6). Do not use the reset button until you have read all the information about the different modes (see the *TLP 710CV User Guide)*.

GUI Design and Configuration

Use Extron GUI Configurator (version 1.3 or later) to design the graphical user interface that will appear on the TouchLink panel. Use Extron Global Configurator (version 3.3 or later) to assign functions to the elements of the graphical user interface. For complete information about these software programs, see the help file of the appropriate program.

Extron Headquarters
+1.800.633.9876 (Inside USA/Canada Only)
Extron USA - West
+1.714.491.1500
+1.714.491.1517 FAX
Extron USA - East
+1.919.850.1000
+1.919.850.1001 FAX

Extron Europe
+800.3987.6673
(Inside Europe Only)
+31.33.453.4040
+31.33.453.4050 FAX

Extron Asia
+65.6383.4400
+65.6383.4664 FAX

Extron Japan
+81.3.3511.7655
+81.3.3511.7656 FAX

Extron China
+86.21.3760.1568
+86.21.3760.1566 FAX

Extron Middle East
+971.4.299.1800
+971.4.299.1880 FAX

Extron Korea
+82.2.3444.1571
+82.2.3444.1575 FAX

Extron India
1800.3070.3777
(Inside India Only)
+91.80.3055.3777
+91.80.3055.3737 FAX

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